

A

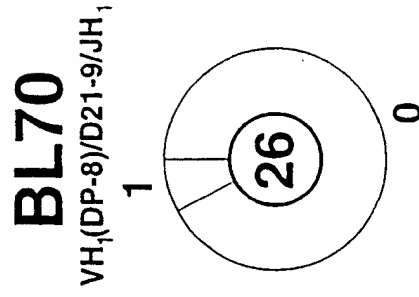
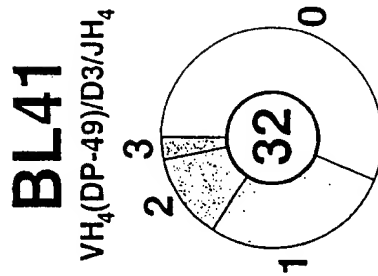
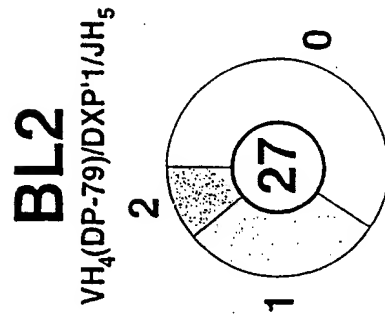
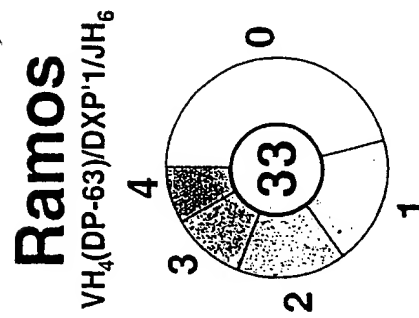


FIG. 1

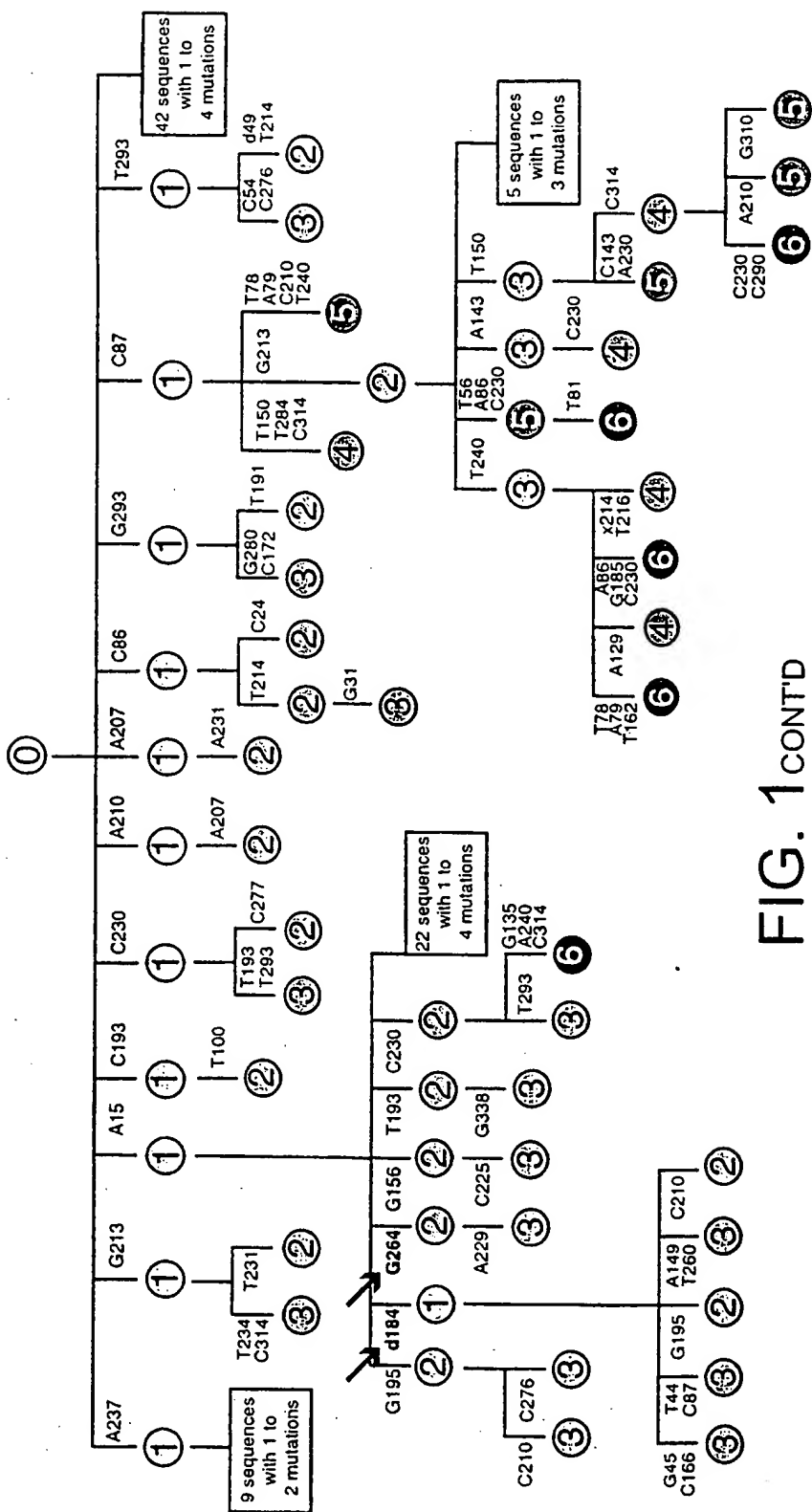
B

FIG. 1 CONT'D

C

D

In Frame V_{λ} Out of Frame V_{λ}

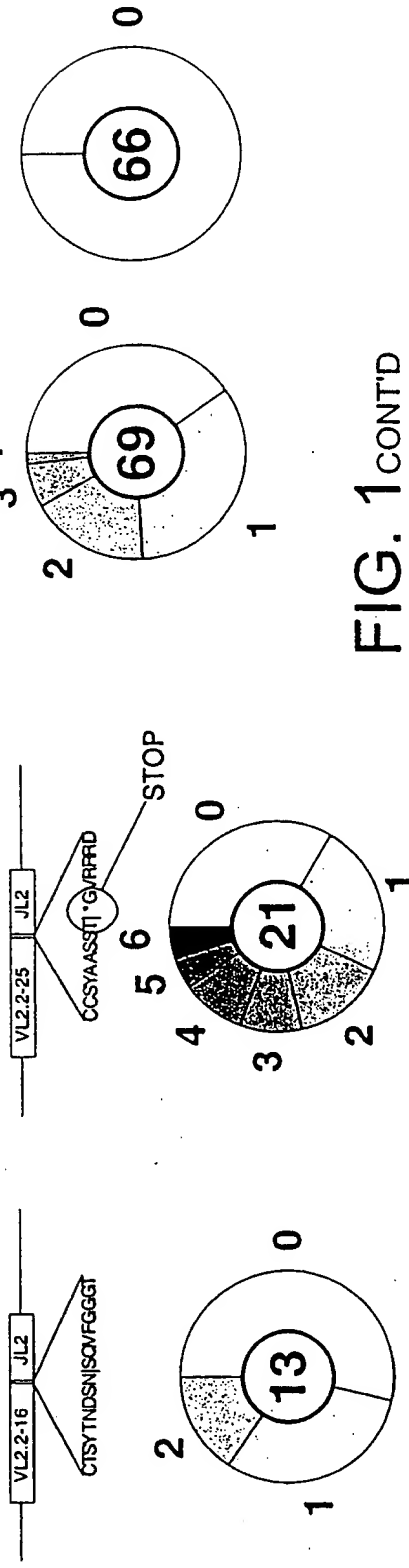
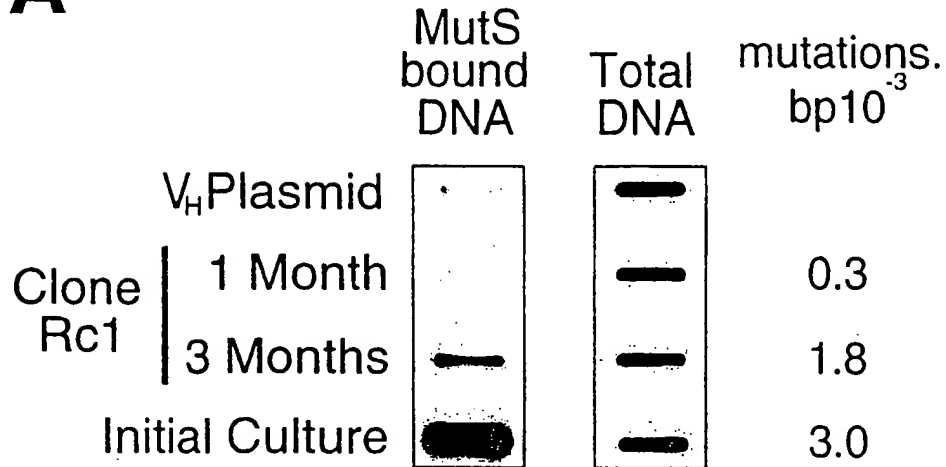
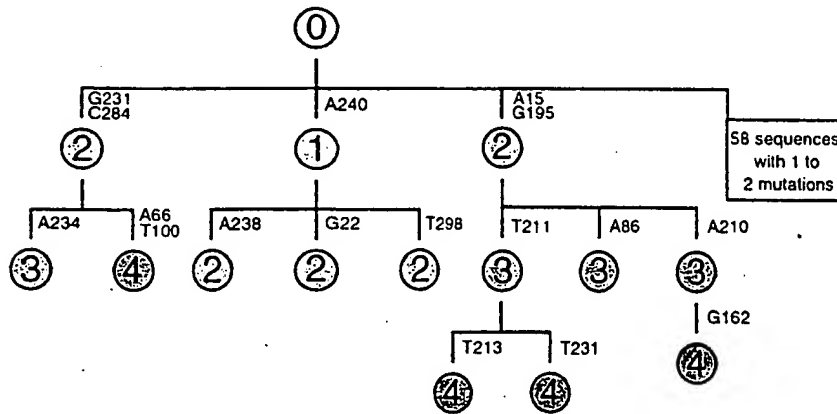
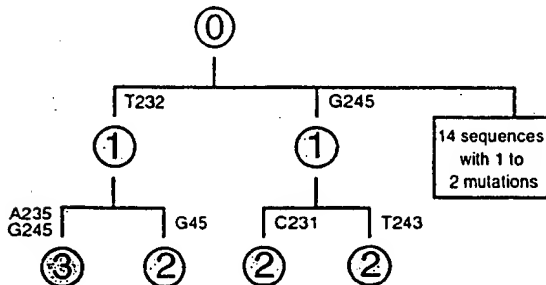
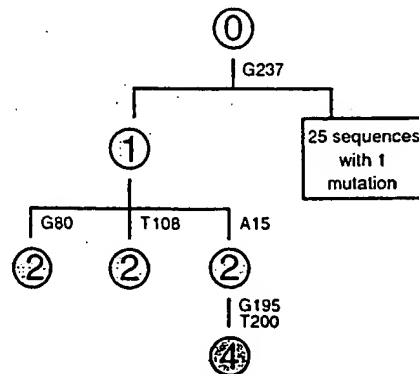


FIG. 1 CONT'D

A**B****Clone Rc13** $0.24 \times 10^{-4} \text{ mutn. bp}^{-1} \cdot \text{div}^{-1}$ **Clone Rc14** $0.22 \times 10^{-4} \text{ mutn. bp}^{-1} \cdot \text{div}^{-1}$ **Clone Rc1** $0.27 \times 10^{-4} \text{ mutn. bp}^{-1} \cdot \text{div}^{-1}$ **FIG. 2**



3
G.
F

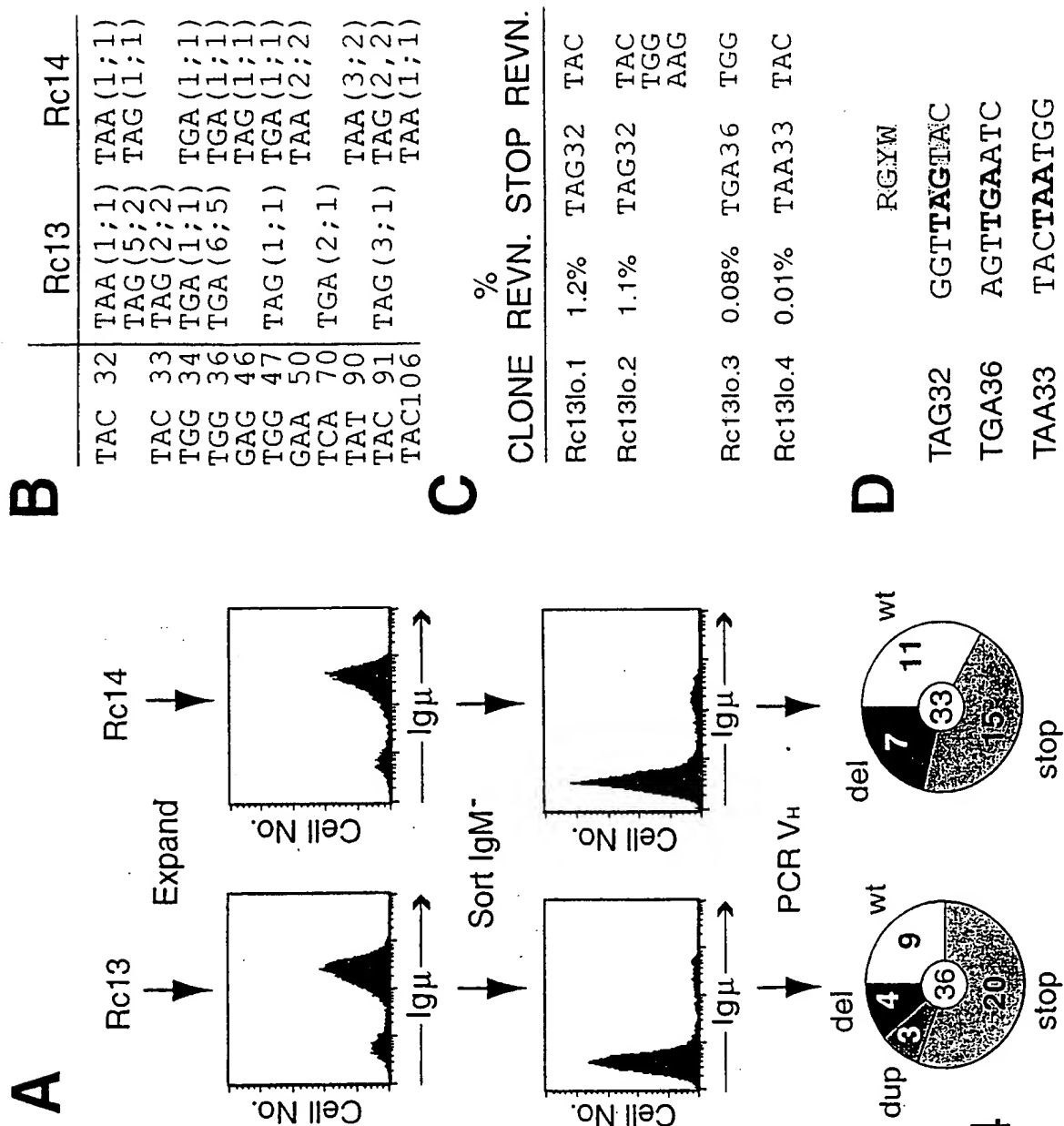


FIG. 4

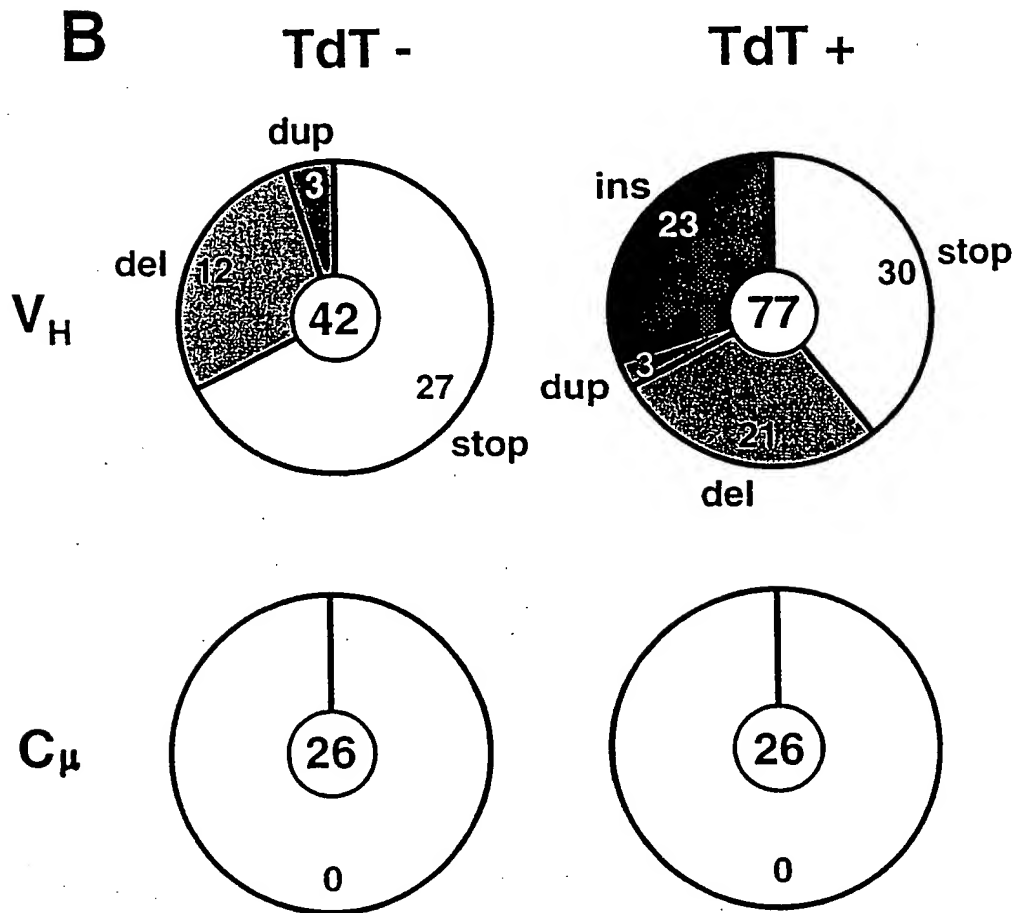
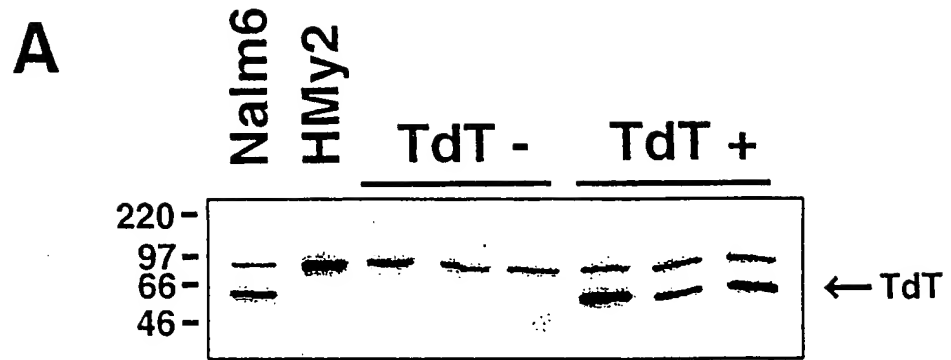


FIG. 5

TdT positive

Events with flanking single nucleotide substitutions

1/1 31/11
TGG GGC GCA GGA CTG TTG AAG CCT TCG GAG ACC CTG TCC CTC ACC TGC GGT GTT TAT GGT
W G A G L L K P S E T L S L T C G V Y G

61/21 91/31
GGG TCC TTC AGT GGT TAC TAC TGG AGC TGG AGC CAG CCC CCA GGG AAG GGG CTG GAG
G S F S G Y Y W S W I R Q P P G K G L E
AGT
S

121/41 151/51
TGG ATT GGG GAA ATC AAT CAT AGT GGA AGC ACC AAC TAC AAC CCG TCC CTC AAG AGT CGA
W I G E I N H S G S T N Y N P S L K S R

181/61 211/71
GTC ACC ATA TCA GTA GAC ACG TCC AAG AAG CAG CTC TCC CTG AAG TTG AGC TCT GTG AAC
V T I S V D T S K K H L S L K L S S V N
ATC CAC
M H

241/81 271/91
GCC GCG GAC ACG GCT GTG TAT TAC TGT GCG AGA GTT ATT ACT AGG GCG AGT CCT GGA ACA
A A D T A V Y Y C A R V I T R A S P G T
TCG CAT GGC
S T H G

301/101 331/111
GAC GGG AGG TAC GGT ATG GAC GTC TGG GGC CAA GGG ACC ACG
D G R Y G M D V W G Q G T T
GTT
V

FIG. 7

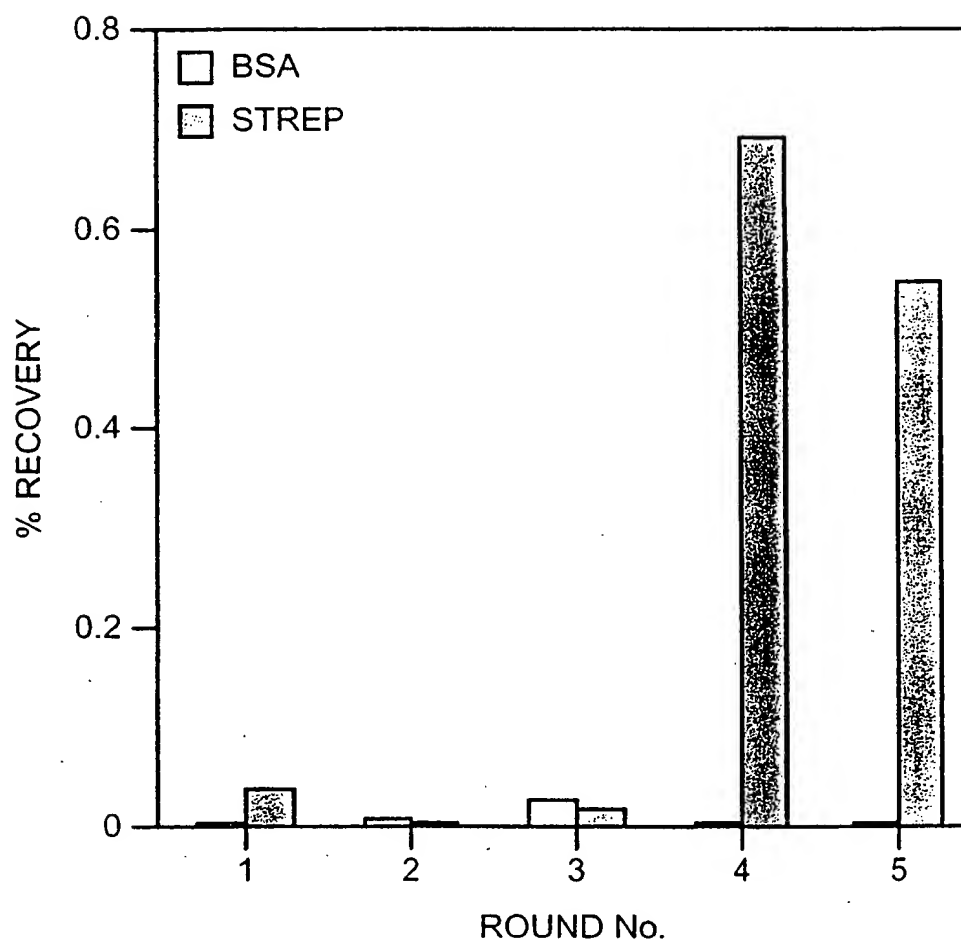


FIG. 8

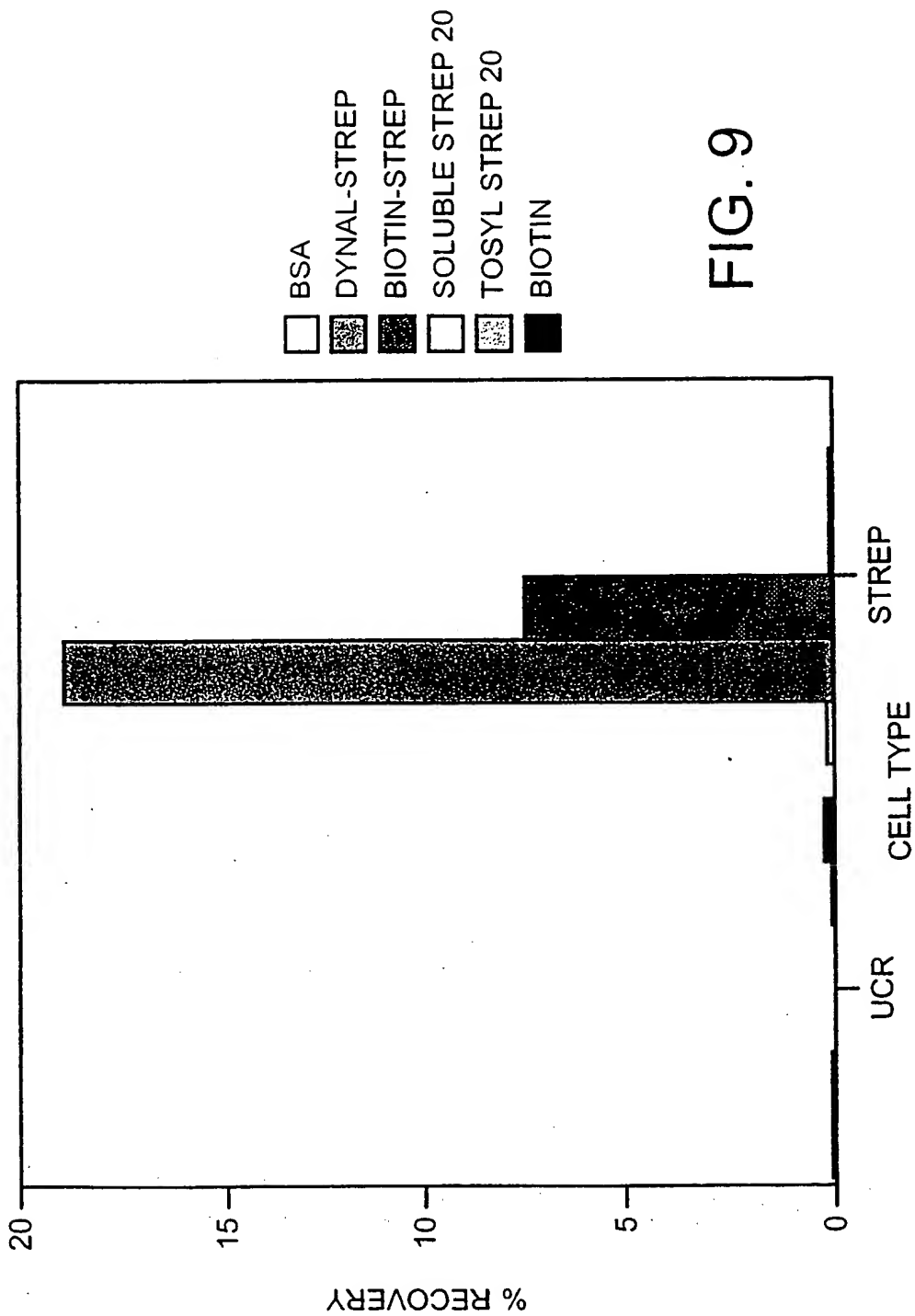


FIG. 9

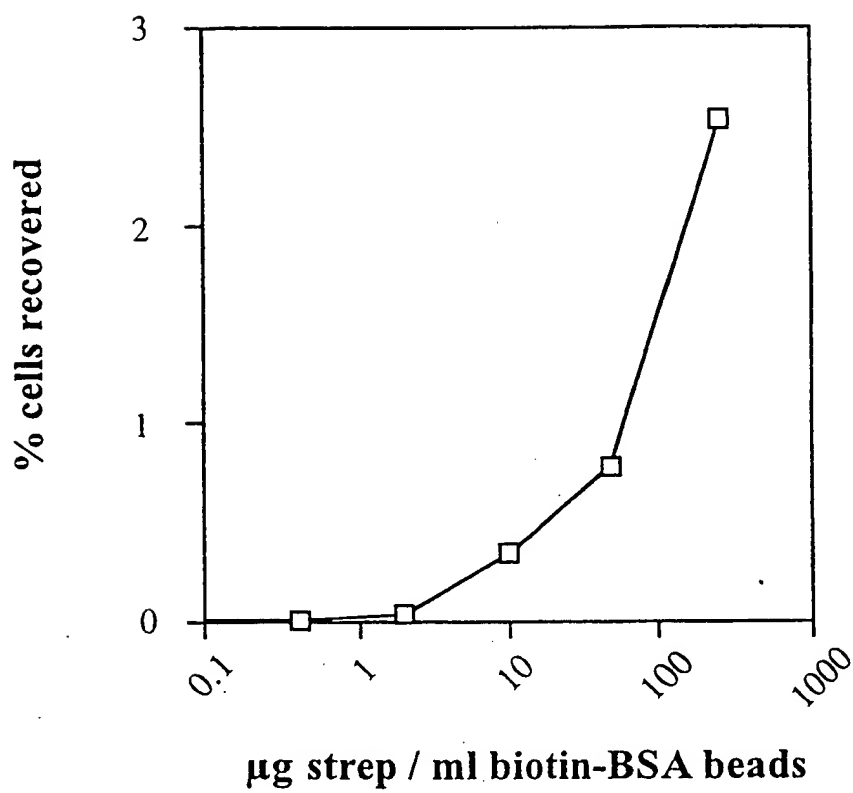


FIG. 10

FIG. 11

HVA

1/11

31/11

121/41

151/51

181/61

201/71

241/81

271/91

301/101

331/111

GGG GGC GCA GGA CTG TTG AAG CCT TCG GAG ACC CTG TCC CTC ACC TGC GGT GTT TAT GGT

W G A G L L K P S E T L S L T C G V Y G

61/21

91/31

GGG TCC TTC AGT GGT TAC TAC TGG AGC TGG ATC CGC CAG CCC CCA GGG AAG GGG CTG GAG

G S F S G Y Y W S W I R Q P P G K G L E

GCA

AGT

G

S

ATT

I

GGG GAA ATC AAT CAT AGT GGA AGC ACC AAC TAC AAC CCG TCC CTC AAG AGT CGA

W I G E I N H S G S T N Y N P S L K S R

GGC ACC ATA TCA GTA GAC ACG TCC AAG AAG CAG CTG TCC CTG AAG TTG AGC TCT GTG AAC

V T I S V D T S S K K H L S L K L S S V N

CAC

H

271/91

GGC GCG GAC ACG GCT GTG TAT TAC TGT GCG AGA GTT ATT ACT AGG GCG AGT CCT GGA ACA

A A D T A V Y Y C A R V I T R A S P G T

301/101

GGC GCG AGG TAC GGT ATG GAC GTC TGG GGC CAA GGG ACC ACG

D G R Y G M D V W G Q G T T

AGC

S

VL

1/1	31/11	
CCT GCC TCC GTG TCT GGG TCT CCT GGA CAG TCG ATC ACC ATC TCC TGC ACT GGA ACC AGC		
P A S V S G S P G Q S I T I S C T G T S		
TAT		
Y		
61/21	91/31	
AGT GAC GTT GGT TAT AAC TAT GTC TCC TGG TAC CAA CAA AAC CCA GGC AAA GCC CCC		
S D V G G Y N Y V S W Y Q Q N P G K A P		
TTT TGT		
F C		
121/41	151/51	
AAA CTC ATG ATT TAT GAT GTC AGT AAT CGG CCC TCA GGG ATT TCT AAT CGC TTC TCT GGC		
K L M I Y D V S N R P S G I S N R F G S		
AAT		
N		
CGA TTA		
R L		
181/61	211/71	
TCC AAG TCT GGC AAC ACG GCC TCC CTG ACC ATC TCT GGG CTC CAG GCT GAC GAG GCT		
S K S G N T A S L T I S G L Q A D D E A		
ATC		
I		
241/81	271/91	
GAT TAT TAC TGC ACC TCA TAT ACA AAC GAC AGC AAT TCT CAG GTA TTC GGC GGA GGC ACC		
D Y Y C T S Y T N D S N S Q V F G G T		
ACT		
T		

FIG. 11 CONT'D

FIG. 12
IgM in supernatant

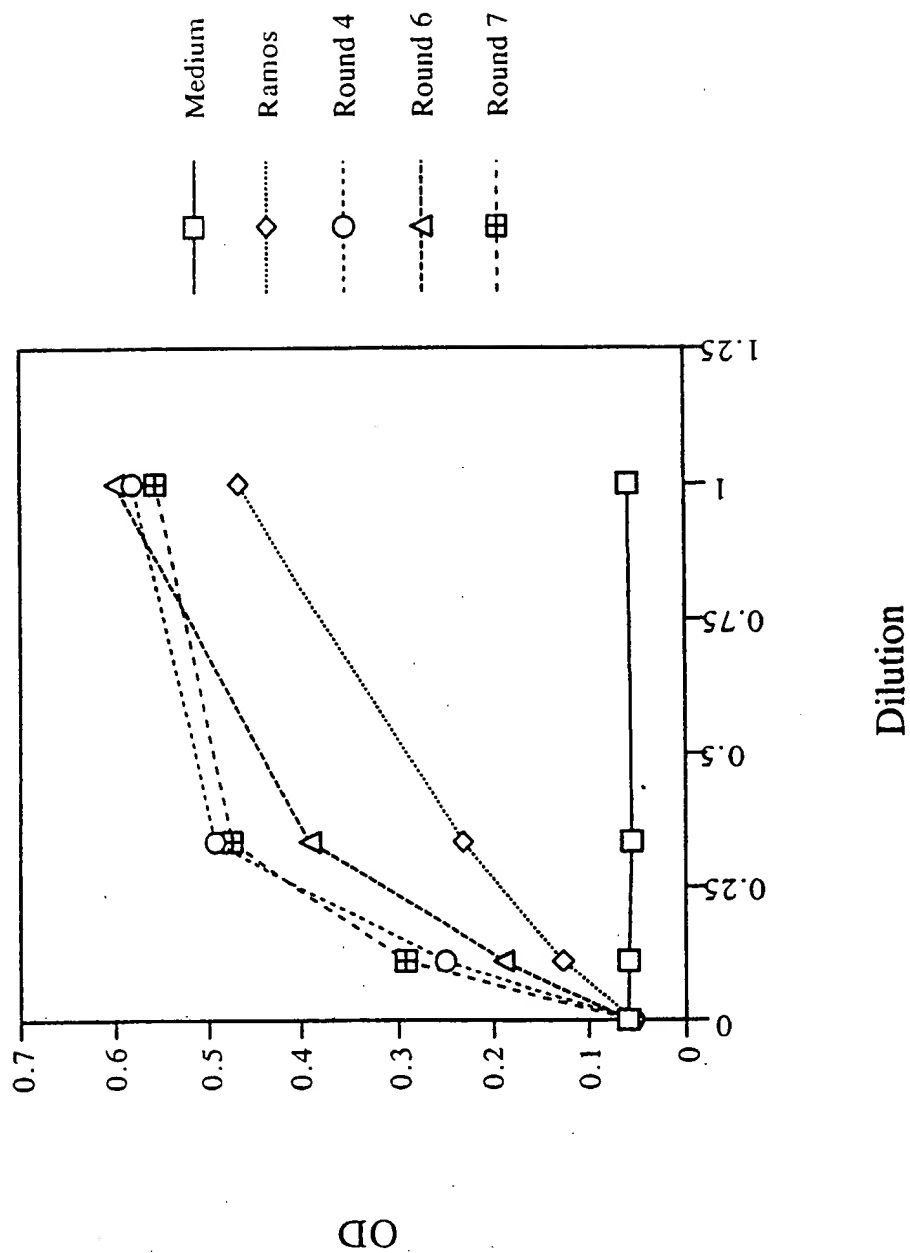


FIG. 13
Streptavidin binding of Supernatants: ELISA

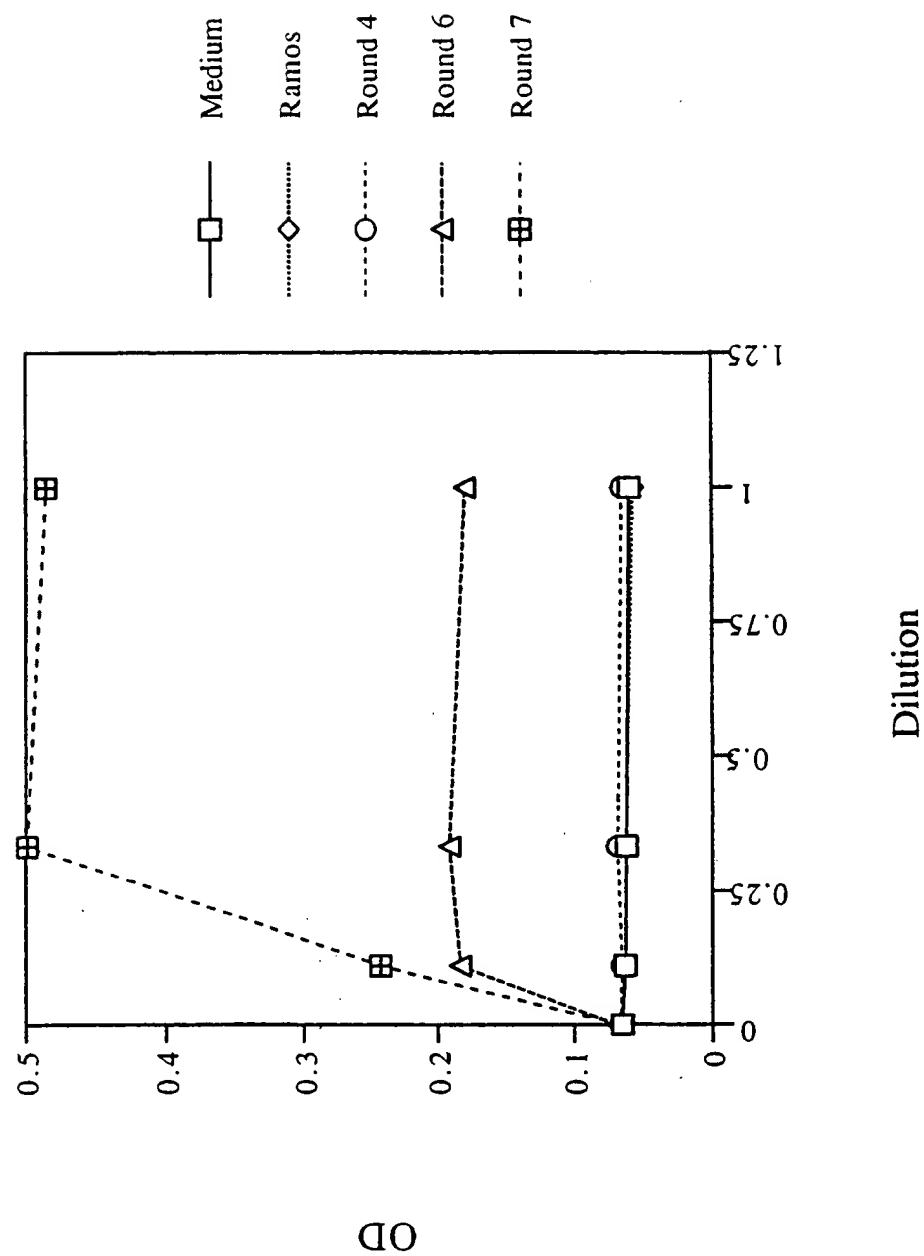
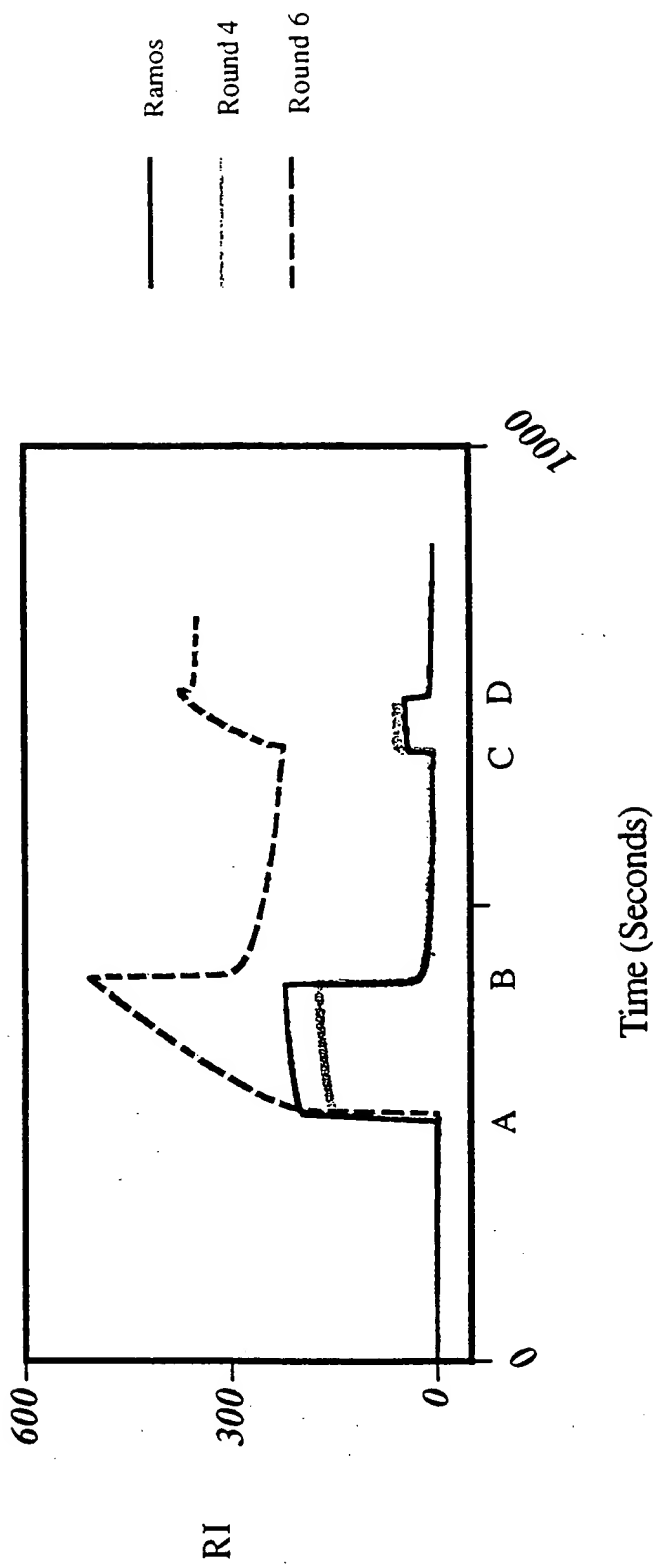


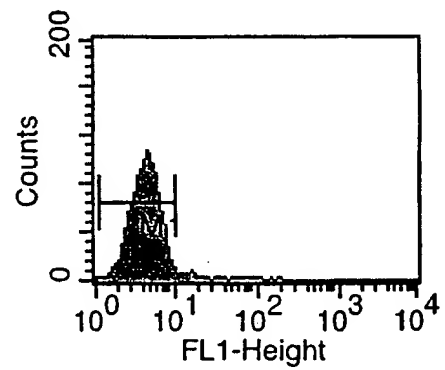
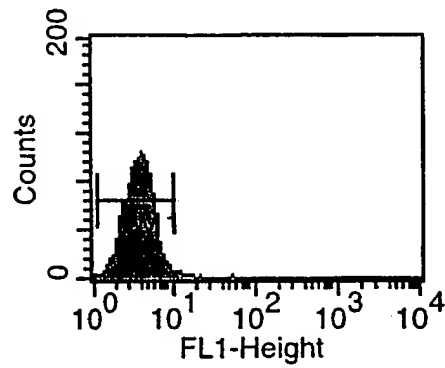
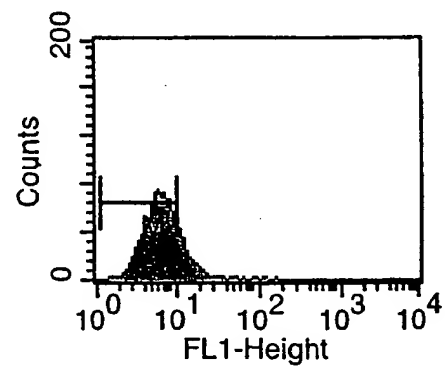
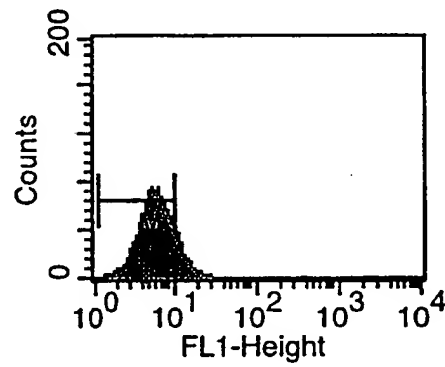
FIG. 14

Streptavidin binding of Supernatants: Biacore

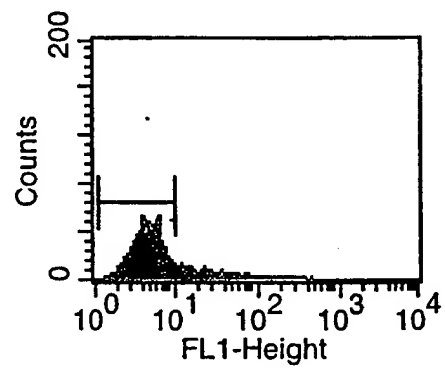
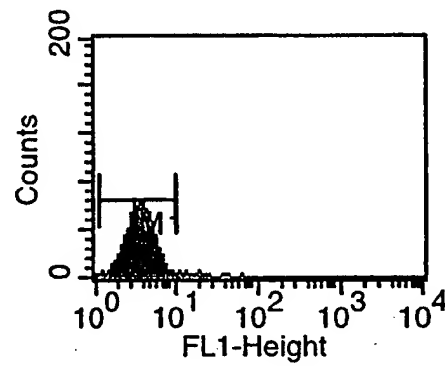


CD8-bio 1/500
Strep-FITC 1/50

Ramos

Ramos
IgM -ve

Round 4



Round 6

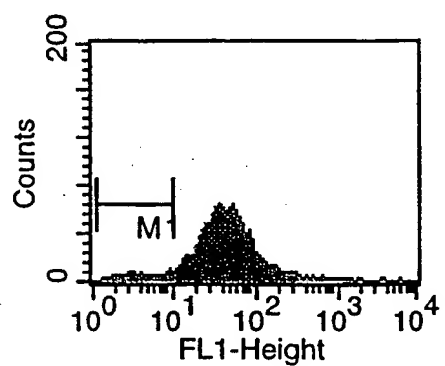
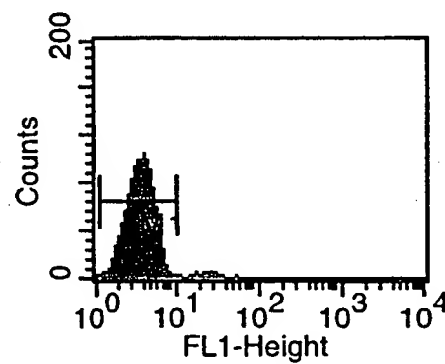


FIG. 15

VH

1/1 31/11
TGG GGC GCA GGA CTG TTG AAG CCT TCG GAG ACC CTG TCC CTC ACC TGC GGT GTT TAT GGT
W G A G L L K P S E T L S L T C G V Y G

61/21 CDR1 91/31
GGG TCC TTC AGT GGT TAC TAC TGG AGC TGG ATC CGC CAG CCC CCA GGG AAG GGG CTG GAG
G S F S G Y Y W S W I R Q P P G K G L E

121/41 CDR2 151/51
TGG ATT GGG GAA ATC AAT CAT AGT GGA AGC ACC AAC TAC AAC CCG TCC CTC AAG AGT CGA
W I G E I N H S G S T N Y N P S L K S R

181/61 211/71
GTC ACC ATA TCA GTA GAC ACG TCC AAG AAG CAG CTC TCC CTG AAG TTG AGC TCT GTG AAC
V T I S V D T S K K H L S L K L S S V N

241/81 271/91 DJ
GCC GCG GAC ACG GCT GTG TAT TAC TGT GCG AGA GTT ATT ACT AGG GCG AGT CCT GGA ACA
A A D T A V Y Y C A R V I T R A S P G T

301/101 331/111
GAC GGG AGG TAC GGT ATG GAC GTC TGG GGC CAA GGG ACC ACG
D G R Y G M D V W G Q G T T
AGC
S

1/1	31/11	CDR1
P A S V S G S P G O S I T I S C T G T S	GCC TCC GTG TCT GGG TCT CCT GGA CAG TCG ATC ACC ATC TCC TGC ACT GGA ACC AGC	

61/21 91/31

AGT GAC GTT GGT TAT AAC TAT GTC TCC TGG TAC CAA CAA AAC CCA GGC AAA GCC CCC
S D V G G Y N Y V S W Y Q Q N P G K A P

TTT TGT
F C

121/41	AAA CTC ATG ATT TAT GAT GTC AGT AAT CGG CCC TCA GGG ATT TCT AAT CGC TTC TCT GGC
K L M I Y D V S N R P S G I S N R F G S	
	GCT
A	

181/61
S K S G N T A S L T I S G L Q A D D E A
TCT GGC AAC ACG GCC TCC CTG ACC ATC TCT GGG CTC CAG GCT GAC GAC GAG GCT
211/71

[illegible]

FIG. 16 CONT'D

In Vitro Maturation

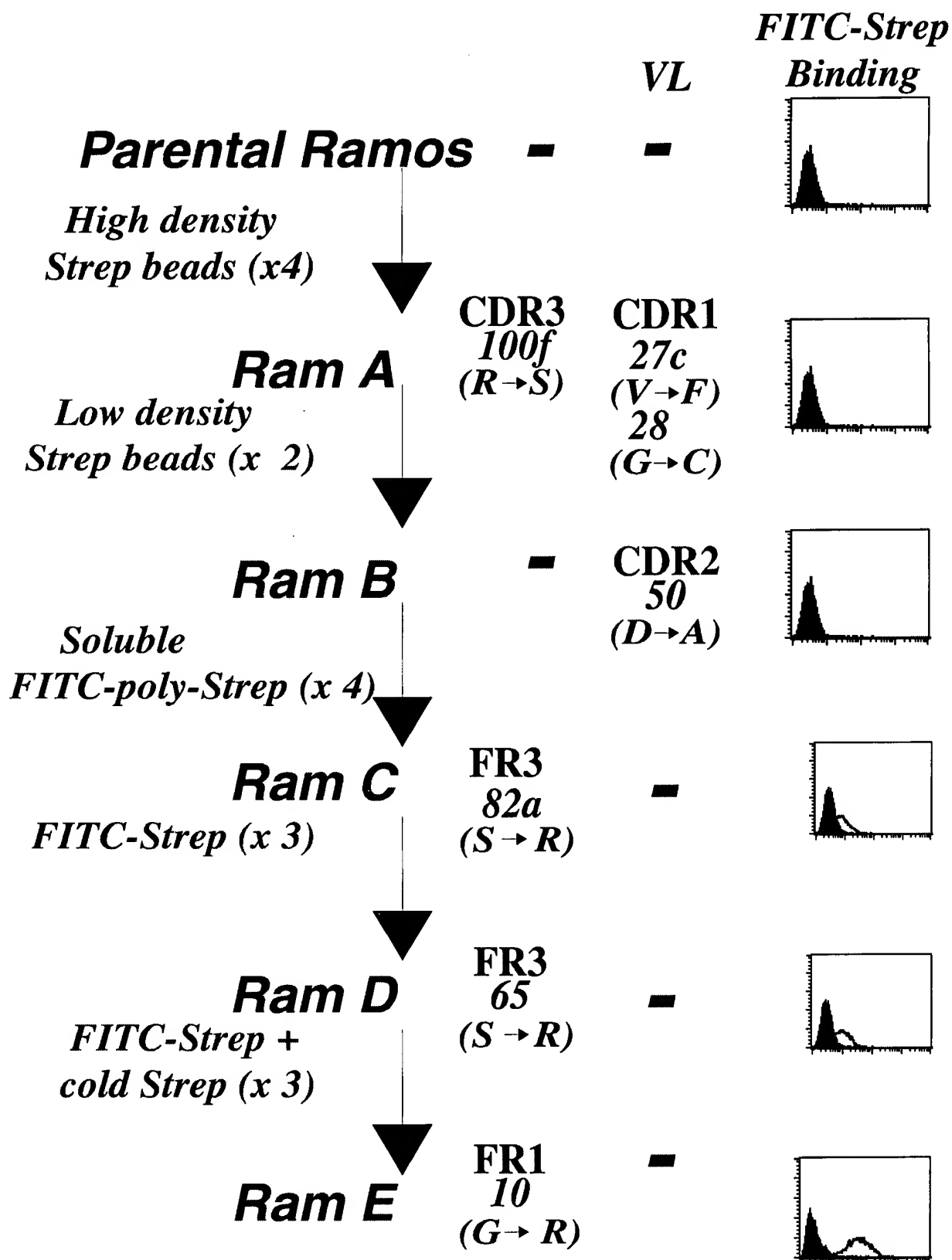
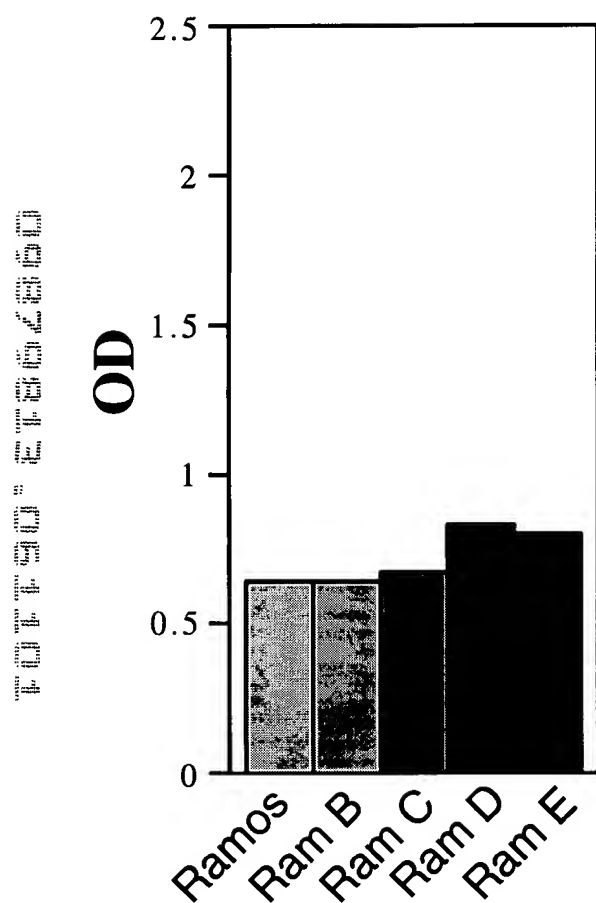


FIGURE 17

IgM ELISA



Strep ELISA

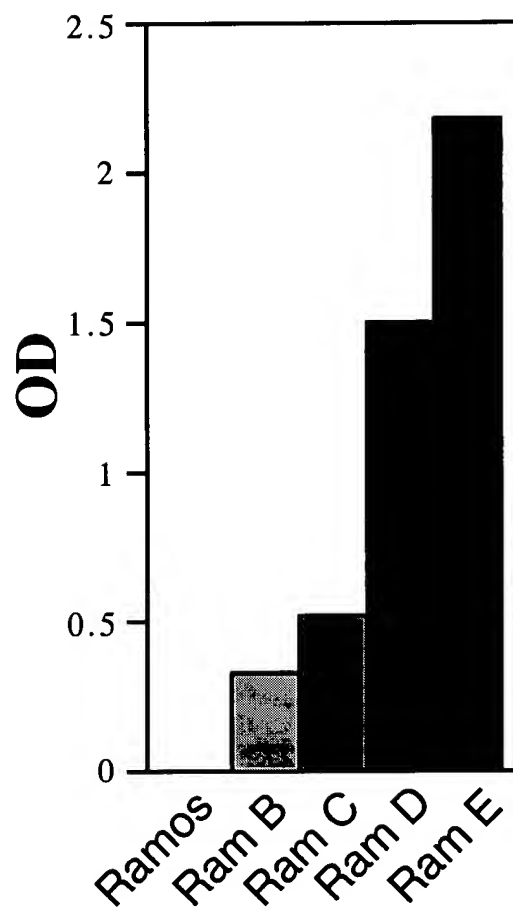
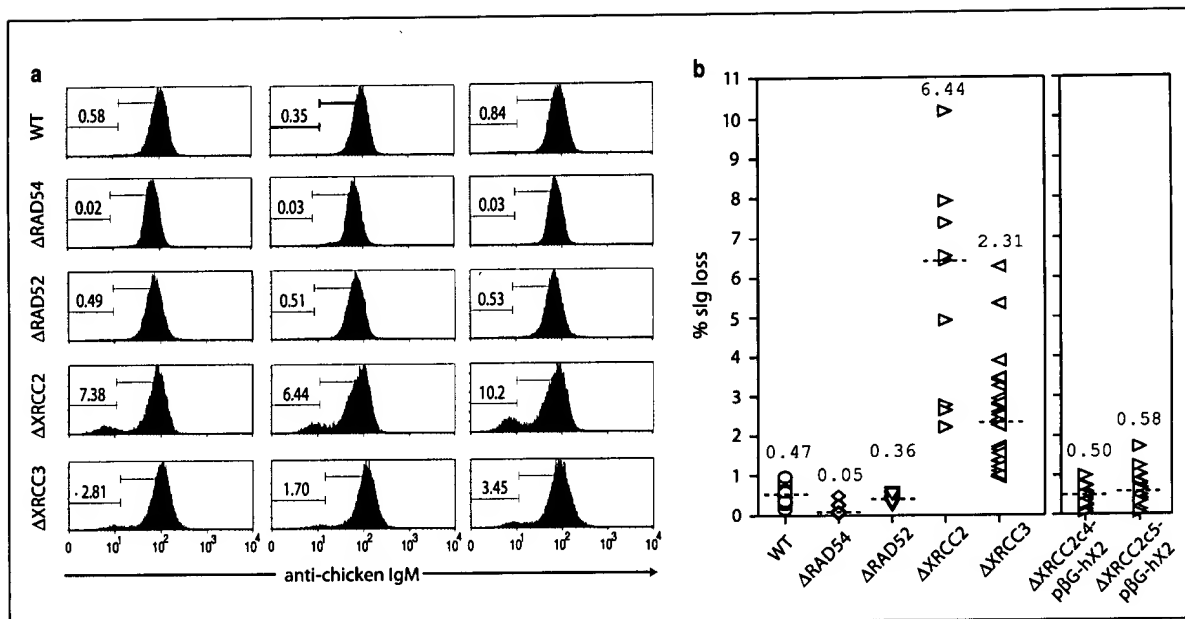
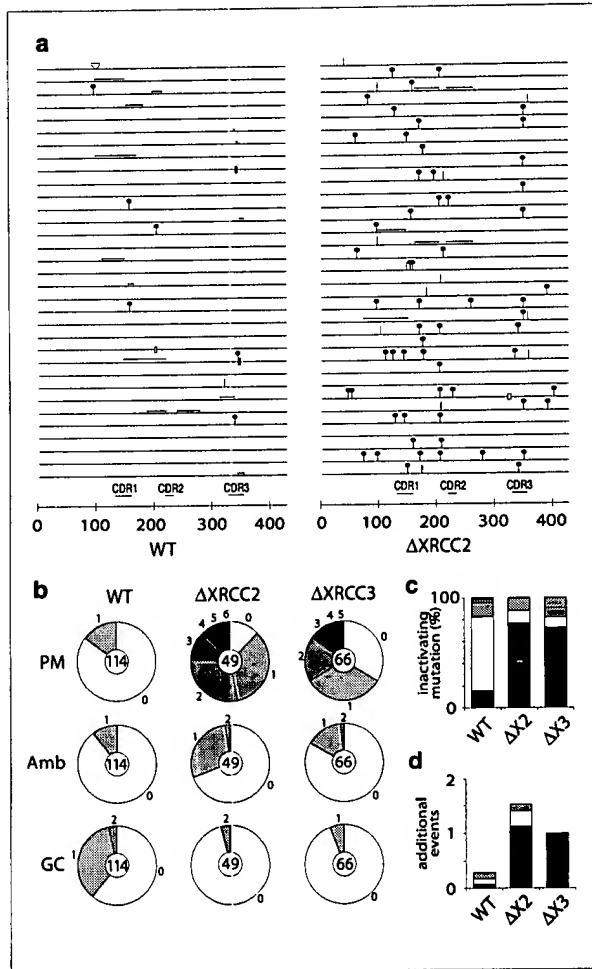


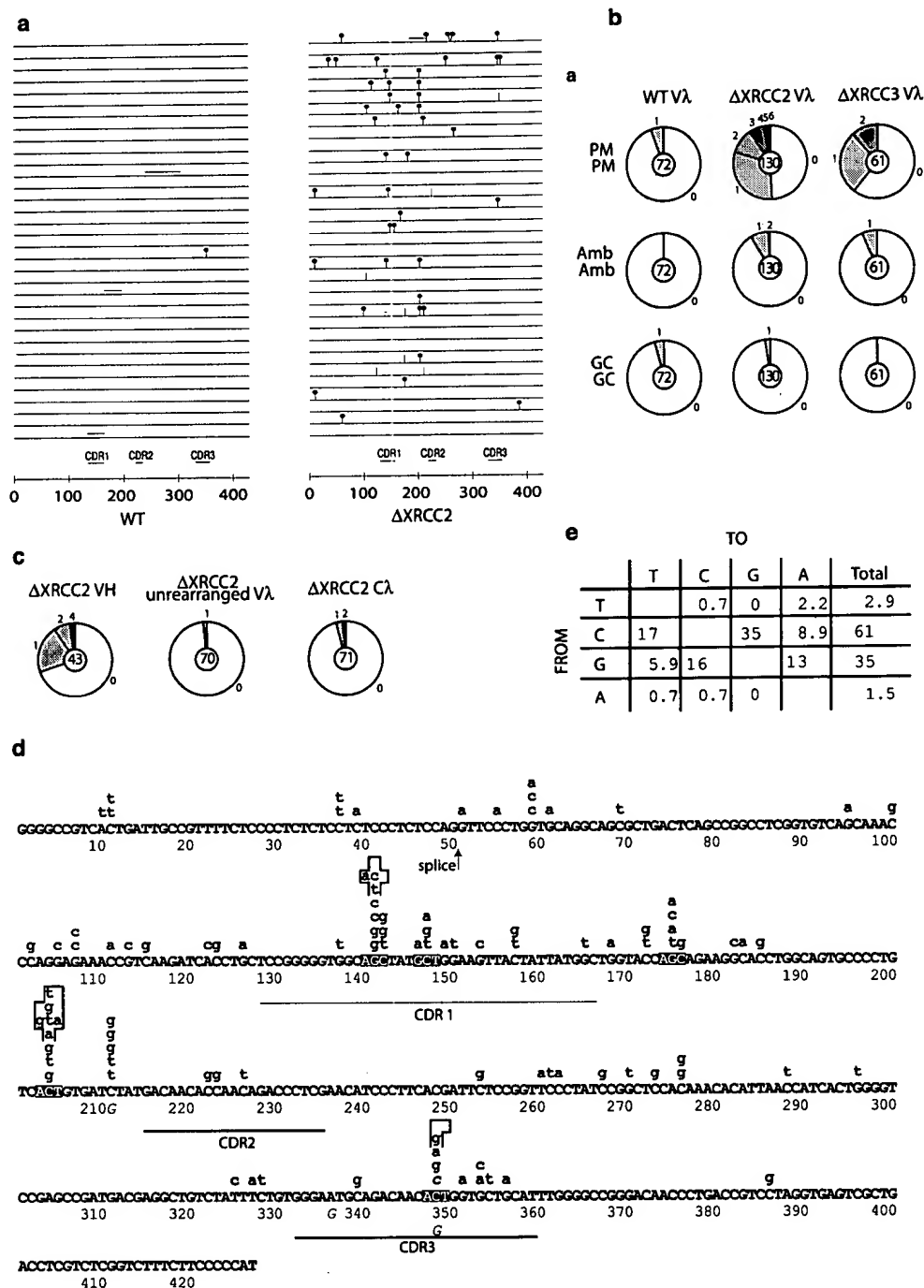
FIGURE 18



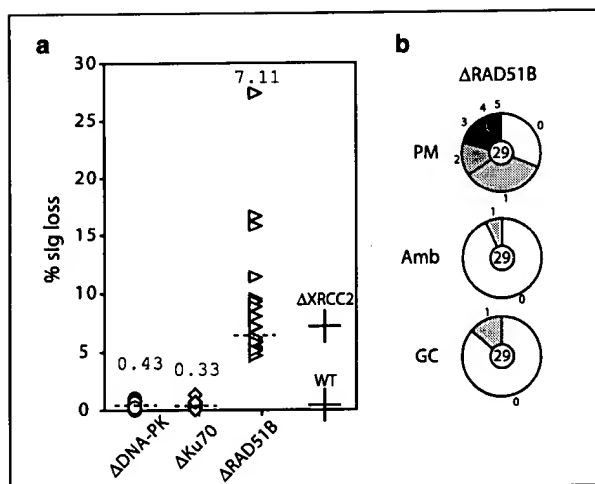
FIGURES 19A-B



FIGURES 20A-C

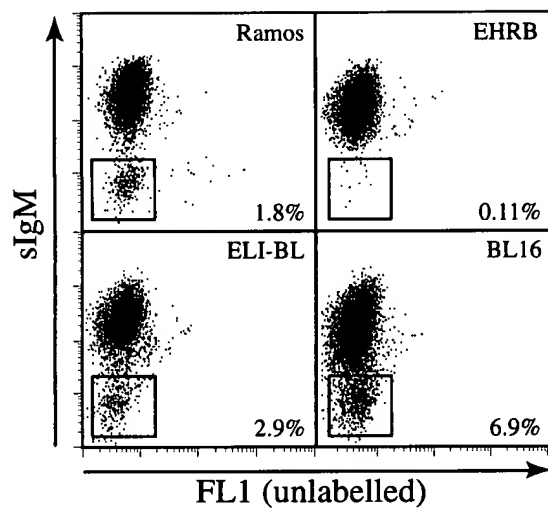


FIGURES 21A-D

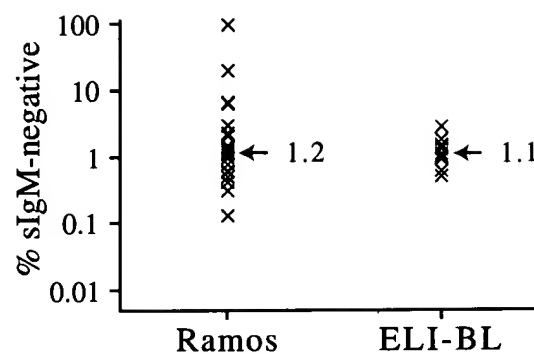


FIGURES 22A-B

A.



B.



C.

GTG CAG CTG GTG GAG TCT GGG GGA GGC GTG GTC CAG CCT GGG GGG TCC CTG AGA CTC ^tTCA TGT GCA
 V Q L V E S G G G G V V Q P G G S L R L S C A
 1 10
 GCC TCT GGA TTC ^tACC GTC AGT ^{a g}AGC ^gAAC TAC ATG ACC TGG GTC CGC CAG GCT CCA GGG AAG GGG CTG
 A S G F T V S S N Y M T W V R Q A P G K G L
 30 40
 GAG TGG GTG TCA ^tCTT ^aATT TAT ^aAGC ^cGGT ^{a c}GGT ^tAGC ^cACA ^{c g}ACA TAT ^tTAC GCA GAG TCC ^tGTG ^{c c}AAG GGC CGA
 E W V S L Y S G G S T T Y Y A E S V K G R
 50 60
 TTC ^tACC ATC ^cTCC AGA GAC AAT TCC AAA AAC ^{t a}ACG ATG TAT CTT CAA ATG AAC AGC ^tCTG ^aAGA GTA GAG
 F T I S R D N S K N T L Q M N S L R V E D T
 70 80
 GAC ^tACG GCT ^aGTG TAT TAC TGT GCG GGA ^aGAC ^tCTG ^aAAC ^tAGC ^aACC TCG GTA GGG ACT ^gAAT AAT TTC TAC
 M N S V R V E D T A V N S T S V G T N N F Y
 90 100 110
 ATG GAC GTC TGG GGC AAA GGG ACC ACG ^tGTC ^aACC ^tGTC TCC TCA
 M D V W G K G T T V T V S S
 120

FIGURES 23A-C